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AUTHOR Bucky, Steven F.
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AVAILABLE FROM Steven F. Bucky, Naval Alcohol Rehabilitation Center, Naval Station, Box 80 Evaluation and Analysis Department, San Diego, California 92136

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IDENTIFIERS *Navy

ABSTRACT

The purpose of this paper is to describe the Navy's Alcohol Rehabilitation Program and to discuss the research that has been completed through 1976 measuring the effectiveness of the program. The researchers defined program effectiveness as completion of enlistment and recommendation for reenlistment one year after treatment. The results indicated a 76% effectiveness rate. After treatment, patients scored noticeably lower in the anxiety and depression scales of the Minnesota Multiphasic Personality Inventory (MMPI) and significantly higher in the trust, emotional stability, and extraversion scales of the Comrey Personality Scales. The results from questionnaires sent to patients commanding officers indicated that 85% of the men were described as either having had no drinks or drinking infrequently two years after treatment. (Author)

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THE 1976 EVALUATION OF THE NAVY'S ALCOHOL REHABILITATION PROGRAMS

Steven F. Bucky, Ph.D.

Naval Alcohol Rehabilitation Center

San Diego, CA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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THE 1976 EVALUATION OF THE NAVY'S ALCOHOL REHABILITATION PROGRAMS

by

Steven F. Bucky, Ph.D.

The purpose of this paper is to describe briefly the Navy's Alcohol Rehabilitation and Prevention Program and to discuss at some length the research that has been completed through Calendar Year 1976 to measure the effectiveness of the program.

DEFINITIONS

First of all, it is important to mention and define the Navy's alcohol rehabilitation facilities which will be referred to throughout this report.

The largest such facility is the Alcohol Rehabilitation Center (ARC) which has a 75-bed capacity. Here, the patient receives approximately six weeks of rehabilitation involving medical, psychiatric, psychological approaches; introductions to the principles of Alcoholics Anonymous; and education about alcohol, alcoholism, and substance abuse.

Next, an Alcohol Rehabilitation Unit (ARU) is a 10 to 25-bed facility located within a Naval Hospital. The average length of stay here is also approximately six weeks and the patients receive similar treatment to that provided at an ARC. The primary difference, other than size, between an ARC and an ARU is that the latter has a medical staff attached to it on a full time basis.

The remaining facility to be described is the Alcohol Rehabilitation Drydock (ARD). The program of an ARD varies somewhat depending on location, nature of patients' deployment schedules, etc. However, it was originally

designed to accommocate 10 to 15 patients for two full weeks and thereafter one half day for the next four weeks, and then one half day per week for the next six weeks. In addition to service members, it is at such a facility that outpatient dependents can be treated. Individual and group counseling, films and lectures are provided.

At the present time, the Navy maintains 4 ARCs, 15 ARUs, and 49 ARDs.

EVALUATION CRITERIA

In evaluating the Navy's alcoholism programs, the first task was to establish the criteria to be used to measure their effectiveness. Answers to the following questions have been used in numerous research projects to evaluate the Navy's Alcohol Rehabilitation and Prevention Program:

1. Upon completion of treatment, is the individual who has at least six months left on active duty able to complete his present enlistment and be recommended for reenlistment?

2. What is the frequency of sick call visits and the frequency and length of hospitalizations for a 2-year period before and after treatment?

3. How is the man functioning on the job--as determined by evaluations filled out by the individual's Commanding Officer (CO) at intervals of 6, 12, and 24 months following treatment? (Questionnaires are sent from the ARC, ARU or ARD in which the patient was treated to his present CO to evaluate his present level of functioning. In addition, the CO is asked to determine whether he would recommend the individual for reenlistment as well as for promotion or advancement.)

4. What is the change in psychological test data (i.e., change in anxiety, depression, hostility, trust, and ability to relate to other people)?

5. What is the change in drinking habits as measured by self-report questionnaires and evaluations of superiors?

6. What are the changes in attitudes toward drinking, drug use, relationships to others (particularly various forms of authority), as measured by attitudinal questionnaires?

7. What is the frequency with which the individual has had disciplinary difficulties, before and after treatment?

8. What are the discharge rates and types for the patients who have completed treatment?

STUDIES, FINDINGS

The following studies and findings are based on data collected from the various criteria outlined in the preceding paragraphs:

1. Completion of enlistment and recommendation for reenlistment.

a. Young Alcoholics

The overall ARC/ARU effectiveness rate (defined as completion of enlistment and recommendation for reenlistment one year after treatment) is 70%. If the groups are divided into two segments--those 25 years of age or younger and those 26 years and older--at 6 months, older patients have an 81% effectiveness rate and younger patients have a 61% effectiveness rate. At one year, older patients have an 86% effectiveness rate while younger patients have a rate of 43%. At 18 months, older patients have an 81% effectiveness rate and younger, 28% (see Table 1). (Kolb, Gunderson & Bucky, 1975).

b. Black Alcoholics

Using the criterion of being able to complete one's enlistment and be recommended for reenlistment, black and white alcoholics in the Navy's

ARCs and ARUs have similar effectiveness rates (approximately 76%); however, young black alcoholics do particularly poorly. A black E1 or E2 has less than a 17% chance to be effective whereas a white alcoholic within a similar pay grade has a 42% chance to be effective. For E3's and above, black alcoholics tend to do slightly better than their white counterparts at each pay grade (Kolb, Gunderson & Bucky, 1975).

C. Centers vs Units

In comparing the effectiveness of ARCs versus ARUs, it appears that the patients who are treated at units tend to have more serious alcohol problems and more severe emotional and physical difficulties. The ARC patients tend to be somewhat younger with fewer years in the service and with a longer alcoholism history. The effectiveness rate tends to be higher for the centers than the units. Those facilities that do considerable outpatient treatment tend to do worse than the facilities who treat their patients on inpatient status for at least 3 - 4 weeks. Similarly, that center which has the greatest number of young alcoholics does worse overall than other centers. The centers with fewer young patients seem to do better with what young patients they have (Kolb, Gunderson, & Bucky, 1975).

2. Hospitalization Rates

A study of 161 enlisted men who had been treated at the ARS in Long Beach, California, was conducted to determine the frequency with which they had been hospitalized two years prior to treatment and two years after. The results (see Figure 1) indicate that, before treatment, lost time due to hospitalization is significantly on the increase (two years before ARC vs one year before ARC). After treatment, the number of days lost decreases continuing into the second year (one year after the ARC vs the second year after the ARC). Cumulatively, a striking reduction in number

of sick days occurred after treatment: 4,143 days before ARC; 2,228 after treatment. In the 12-month period, two years prior to treatment, the average number of hospital days was 8.5 per patient. In the 12-month period immediately prior to treatment, the average was 17.2. During the 12-month period immediately following treatment, the average dropped to 8.5 and continued to drop to 5.4 in the 12-month period 1 to 2 years following treatment (Bucky & Edwards, 1975).

If one defines "sobriety" as the discharge date from the ARC, the total number of days lost from one's job due to medical illness (including alcoholism) is 12,509 in the 2-year period prior to discharge from the ARC. The number of days lost in the 2-year period post ARC is 2,228 (pre-sobriety/post-sobriety rate = 5.6/1.0). The psychiatric incidence rate pre ARC/post ARC is 5.0/1.0.

Since alcoholics have been found to have a significant decrease in hospitalization upon completion of rehabilitation, the CO is also asked to indicate the frequency with which the patients were on the sick list since reporting to the command following treatment. In the six month evaluation, 89% of the men were described as never having been on the sick list. This figure decreased to 86% at the 12-month evaluation and to 79% at the 24-month evaluation. Only 3% of the individuals were placed on the sick list more than three times during the two year period following treatment.

In a recent outpatient study, alcoholics, in a two year period before treatment had three times the number of outpatient visits than another group which was selected at random from the San Diego Naval Station Dispensary. They have 12 times the psychiatric incidence rate and three times the number of visits for lacerations and broken bones and, also, three times the number of visits for VD (Bucky, 1976).

3. Work Performance Evaluations by the Commanding Officer

As previously mentioned, the patient's Commanding Officer receives a questionnaire 6, 12, and 24 months after treatment. The CO evaluates the individual's work performance, military behavior, leadership, adaptability, military appearance, disciplinary record, drinking and medical record. The CO is also asked to indicate whether he would recommend the man for reenlistment as well as for promotion. The results of a study of these evaluations indicate that for work performance, military behavior, leadership, adaptability and military appearance, approximately 90% of all patients receive a good or excellent evaluation. Approximately 85% of the recovering alcoholics were described as having never been absent or late.

In general, the results indicated that at any one period of time, approximately 10% of the patients were receiving poor or unsatisfactory evaluations of work performance, military behavior, leadership, adaptability and military appearance.

The CO is also asked to make a judgment as to whether he would recommend the man for reenlistment as well as promotion if that decision had to be made at the time of the evaluation. Although it is recognized that this situation is artificial, in that it may not directly correspond to that which would have occurred if the man were actually scheduled for promotion or reenlistment, after 24 months, approximately 80% of all patients were recommended for reenlistment and promotion.

4. Change in Psychological Test Data

In a study using 424 alcoholics who were treated at the ARS in Long Beach during fiscal year 1973, the following personality changes were observed, based on findings of three personality research tools:

a. Comrey Personality Scales

There was a significant increase in the patient's level of trust, emotional stability and extraversion upon completion of treatment. It is interesting to note that relative to male adult norms for the scales, before treatment, alcoholics tended to be high in orderliness and social conformity and low in emotional stability and extraversion. They were near the mean on trust, activity, masculinity, and empathy. After treatment, they continued to be high in orderliness and social conformity and scored well within the normal range on the other scales. The scores indicated that the alcoholics in the sample researched were comparable to the general population of adult males in terms of being positively oriented. When negative attitudes or personality variables were present (e.g., emotional stability, extraversion), treatment brought considerable change for the good (see Figure 2) (Bucky & Edwards, 1975).

When dividing the patients by age, young alcoholics were found to be significantly lower in trust, orderliness, and emotional stability upon admission to treatment, although both groups notably improved in these areas following treatment.

b. Minnesota Multiphasic Personality Inventory

There was a drastic decrease after treatment on 6 of the 11 scales of this inventory which reflect pathogenic characteristics of the patients. The results indicated that the patients, after treatment, were noticeably lower in anxiety and depression; they admitted to fewer somatic complaints; there were fewer reports of the impulse to act out aggressively and sexually; and there was less of a feeling of being different from other people (see Figure 3).

Again, when these patients were divided as to age, young alcoholics were found to be lower in defensiveness and higher in depression, paranoia and anxiety upon admission for treatment. Both groups, following treatment, decreased their levels of hysteria, impulsiveness, paranoia, anxiety and feeling different from others (Bucky & Edwards, 1975).

c. Anxiety Questionnaire

Upon admission to the ARC, the patients were extremely high in "state anxiety" -- defined as the anxiety related to a particular situation. Anxiety continued to decrease markedly over the two months in which the patient was at the center with the final level of anxiety being greatly different from the initial level and well within the norms established by the questionnaire's authors. The analysis of anxiety by weekly periods indicated that the anxiety level changed quickly by the third week and did not change to any great degree after that time (see Figure 4). (Bucky and Edwards, 1975).

5. Change in Drinking Habits

The results from the questionnaires sent to the COs indicated that 85% of the men were described as either having had no drinks or drinking infrequently two years after treatment. At the 6-month evaluation, 42% were abstinent. This number decreased to 37% at the 12-month and 40% at the 24-month follow-up period. Those individuals described as "drinking often" increased from 15% at 6 months to 19% at 12 and 24 months.

When following up on patients who have been treated in the alcohol rehabilitation program, it has been found that for the young group of patients who have been labeled "effective" in terms of work performance, 68% are still drinking. Of the older group so labeled, only 28% have been

drinking. These results suggest that the older individual treated for alcoholism is much less likely to effect major work change if he goes back to drinking following treatment.

6. Disciplinary Difficulties

The Commanding Officer was asked to state whether the individual had any disciplinary difficulties while at his command. At the 6-month evaluation, 87% of the patients had not had any disciplinary problems. The 12 and 24-month ratings indicated that approximately 80% had never received any disciplinary action. At the 24-month interval, 7% of the patients had had more than three disciplinary actions taken against them.

7. Attitude Change

Four hundred and sixteen alcoholics treated at the Long Beach ARS were given a series of attitudinal questionnaires which produced the following results: from the first week to the final one at the service there was definite positive growth in terms of attitude change related to alcohol and drug abuse as well as towards various forms of authority, such as doctors, corpsmen, officers, policemen, teachers, etc.

8. Discharge

For this criterion, the types of discharges were computed for the first 322 patients who had gone through the ARS at Long Beach, and were subsequently discharged from the service. Using a conservative estimate of what is considered a "positive" type discharge (i.e., honorable), the following results were obtained (see Table 1): 174, or 55%, of the patients received positive discharges, and 83, or 26%, received negative ones (unsuitability, unfitness, or bad conduct). Twenty-two or 7% received a medical discharge and 34, or 11%, were discharged for reasons that could

neither be classified as positive or negative (e.g., transfer of duty station, separation, convenience of government, dependent hardship, or death).

9. Length of Treatment

Preliminary results show that if a patient has been in treatment for more than 23 days, he has at least a 70% chance of being effective. Twenty-two days and less produces an effectiveness rate of 21% or less. This is particularly true of young patients treated at alcohol rehabilitation facilities.

10. Recidivism

In the past, recidivists (or returnees) have been classified as "failures." However, since there are many productive recovering alcoholics who had to "test" their sobriety at least once, a decision was made to eliminate recidivists from the alcohol follow-up data base for at least six months following their second treatment. Using six months as the criterion period following their second treatment, there was over a 70% effectiveness rate for recidivists. Patients who are over 25 years and who are recidivists have an 84% chance of being effective, Patients who were in the service 12 years or more and also recidivists had a 92% effectiveness rate. Those who were E6 and higher had a 100% chance of being effective. These data need to be interpreted with caution as the number of the sample patients was relatively small (Kolb, Gunderson & Bucky, 1975).

11. Psychodrama

This study investigated the effectiveness of psychodrama at the Navy's ARC in San Diego. Findings noted that, in comparison to patients not assigned to psychodrama, psychodrama participants scored lower on five

of the Comrey Personality Scales prior to treatment. The five areas were: trust, activity, emotional stability, extraversion and response bias. However, subsequent to treatment there were no major differences between the two groups, as measured by the Comrey test, even though there were definite positive increases in trust, emotional stability and extraversion for both groups. One possible implication of this finding is that psychodrama involvement contributed to participants' "catching up" emotionally with those individuals who were not involved in it (Wood, Del Nuovo, Michalik, Bucky, and Schein, 1975).

12. Alcohol and Drug Abuse: Similarities and Differences

A study conducted at the Navy's Drug Rehabilitation Center (NDRC) at Miramar, California, showed that those in treatment for drug abuse were much more extroverted and less socially conforming than those who were in treatment for alcohol abuse. Drug abusers were also noted to be younger, had less time in the service, and were in a lower pay grade than were alcohol abusers. Based on a Patient Attitude Questionnaire, 15 of 22 items related to personal attitudes and life-style perceptions clearly differentiated the alcohol and drug abusers (Wood, Skuja, Bucky and Wilcox, 1976). When young Navy alcohol abusers and young Navy drug abusers were compared relative to the Comrey scales, the Patient Attitude and Therapist Questionnaires, similarities between the two groups far outweighed the differences.

FUTURE STUDIES

Future evaluative reports will cover the continuance of the studies described in these pages but will include longer criterion periods and will focus on the Navy's new Alcohol Safety Action Program (NASAP), the counselor training program, the reasons for particular facilities doing better (or worse) with various groups of alcoholics, the effect of bio-feedback on treatment outcome, and the cost effectiveness of the Alcohol Rehabilitation Drydock program.

Note: Requests for reprints of this article or for copies of and/or additional information regarding the various studies referred to in this report should be addressed to:

Steven F. Bucky
Naval Alcohol Rehabilitation Center
Naval Station, Box 80
Evaluation & Analysis Department
San Diego, CA 92136

TABLE 1

FREQUENCY OF DISCHARGE

POSITIVE	CODE	TYPE OF DISCHARGE	No.	%
	801	Honorable — expiration of enlistment	7	2
	802	Honorable within 3 months of expiration of enlistment	14	4
	931	Release from active duty to Fleet Reserve	127	42
	932	Non disability retirement -- 30 years	2	1
	942	Released to USNR -- completion UMT obligation	23	7
	943	Released to Inactive Reserve — completion of obligation	1	0
		TOTAL	174	56
NEGATIVE	817	Honorable — unsuitability due to inaptitude	1	0
	818	Honorable unsuitability — other	23	7
	825	Honorable — unfitness	1	0
	841	General — expiration of enlistment	3	1
	850	General — convenience of government	2	1
	853	General — convenience of government — other	6	2
	857	General — unsuitability — inaptitude	3	1
	858	General — unsuitability — other	16	5
	865	General due to minority	19	6
	871	General misconduct	2	1
	882	Undesirable unfitness	1	0
	887	Undesirable	2	1
	888	Undesirable misconduct	1	0
NEGATIVE	901	Bad conduct discharge	3	1
		TOTAL	83	26
MEDICAL	804	Medical with severance	5	2
	805	Medical without severance	1	0
	933	Medical retirement	16	5
		TOTAL	22	7
OTHER	880	Transfer of duty station for separation	2	1
	813	Honorable — convenience of government	23	7
	814	Convenience of government — dependent hardship	2	1
	952	Death	7	2
		TOTAL	34	11
		TOTAL	322	100

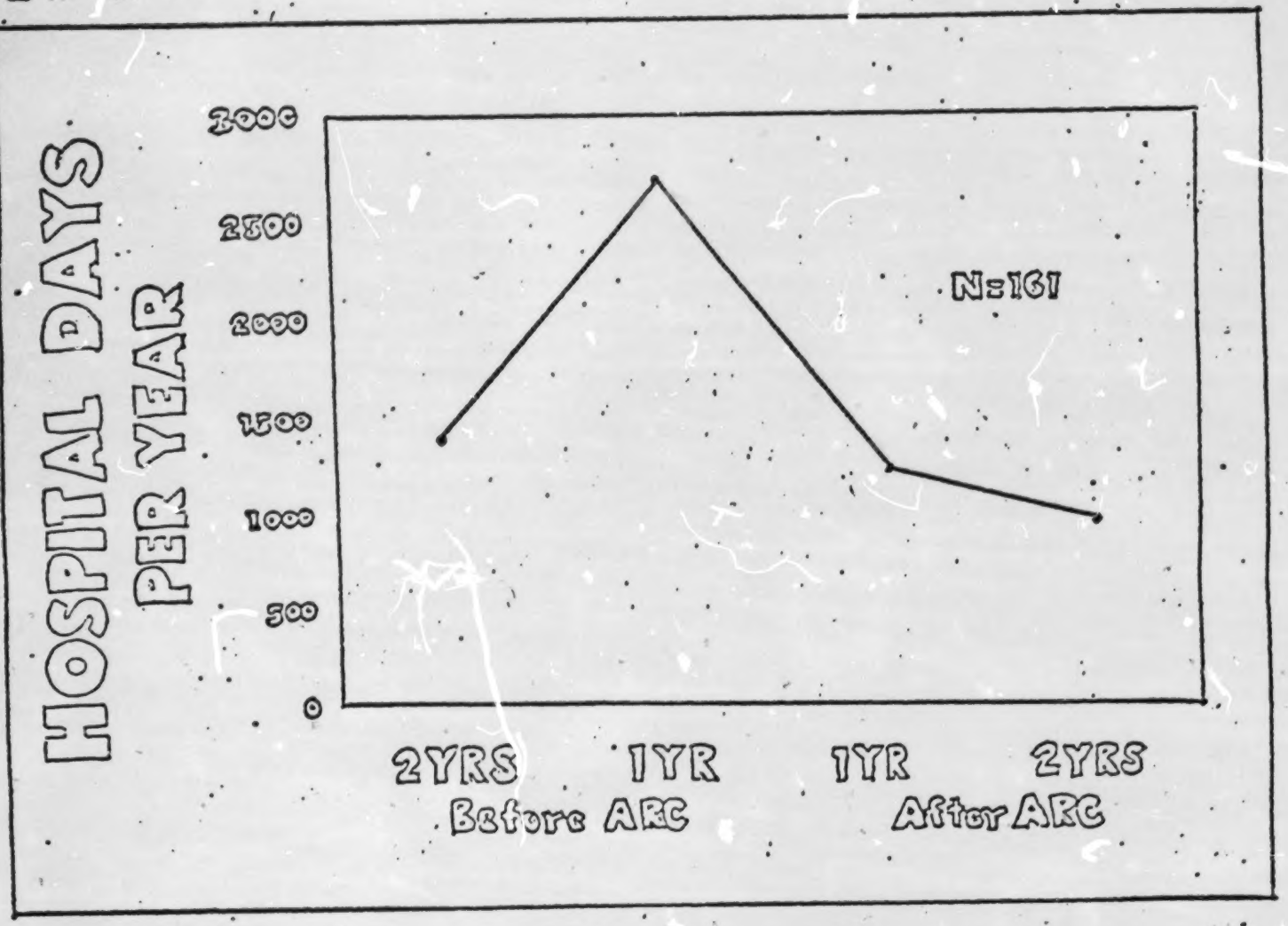
HOSPITAL DAYS PER YEAR
3000
2500
2000
1500
1000
500
0
N=161
2YRS
1YR
1YR
2YRS
Before ARC
After ARC

Figure 1

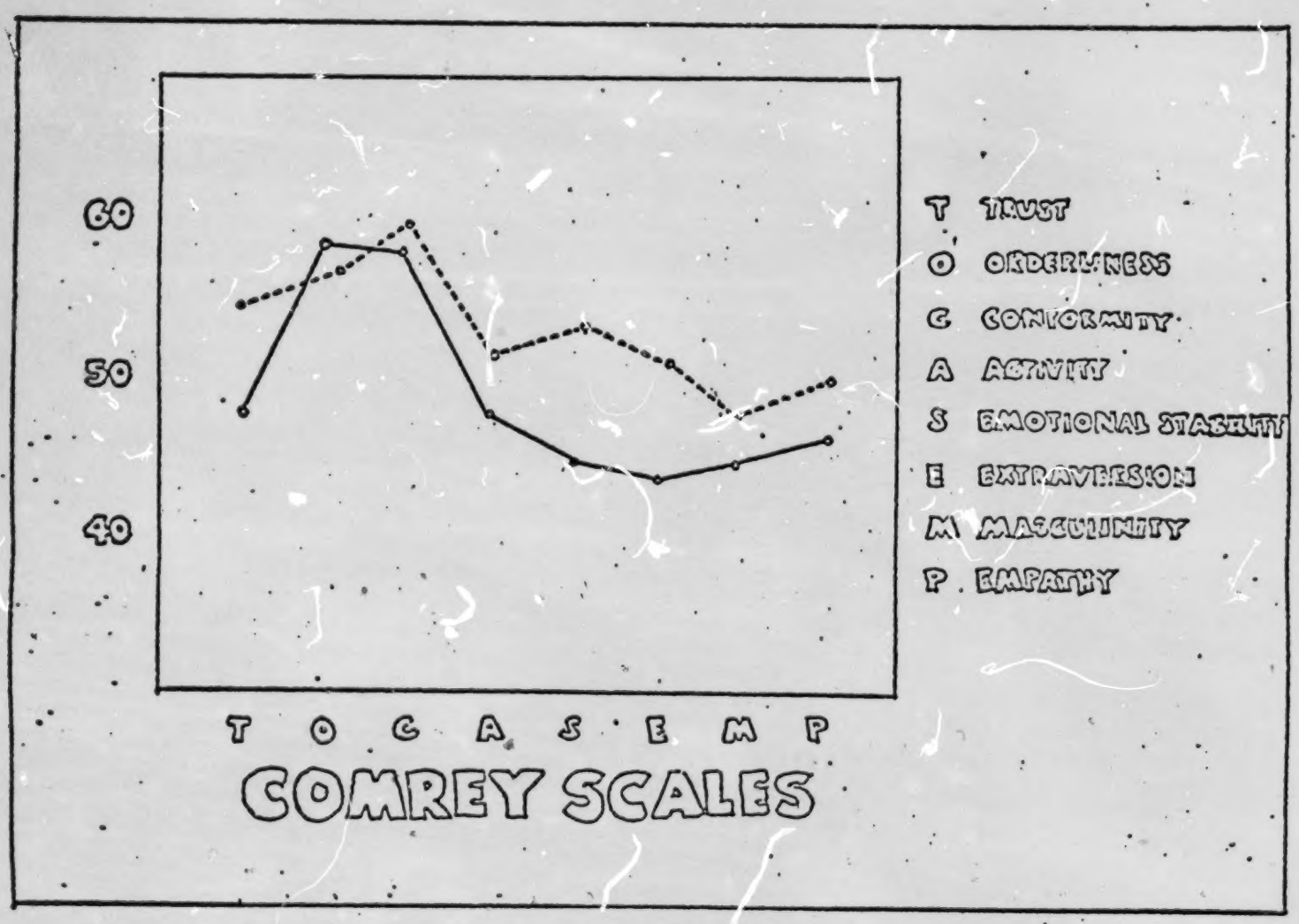
60
50
40
T O C A S E M P
COMREY SCALES
T TRUST
O ORDERLINESS
C CONFORMITY
A ACTIVITY
S EMOTIONAL STABILITY
E EXTRAVERSION
M MASCULINITY
P EMPATHY

Figure 2

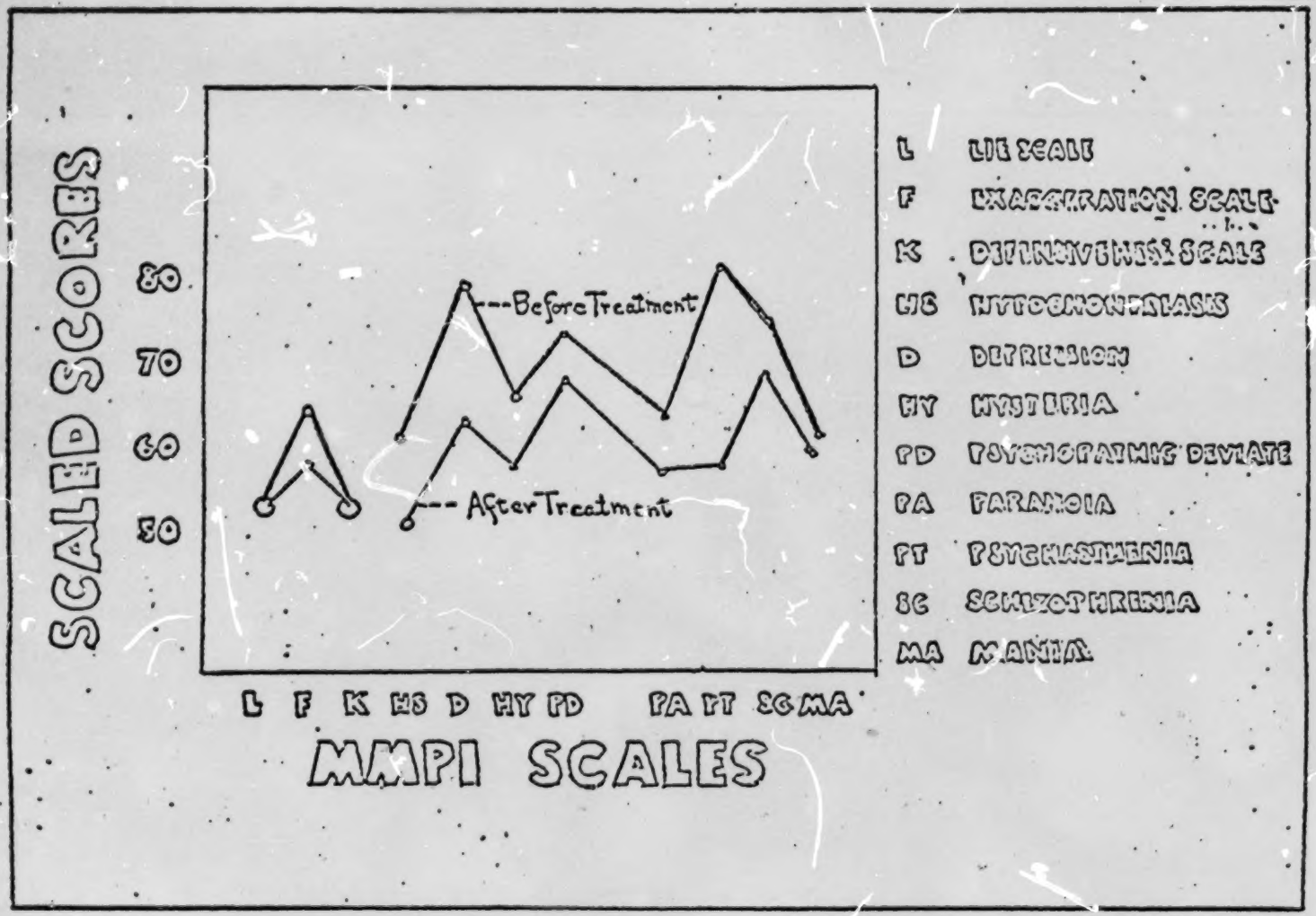
SCALED SCORES
80
70
60
50
---Before Treatment
--- After Treatment
L F K HS D HY PD PA PT SC MA
MMPI SCALES
L LIE SCALE
F EXAGGERATION SCALE
K DEFENSIVENESS SCALE
HS HYPOCHONDRIASIS
D DEPRESSION
HY HYSTERIA
PD PSYCHOPATHIC DEVIATE
PA PARANOIA
PT PSYCHASTHENIA
SC SCHIZOPHRENIA
MA MANIA

Figure 3

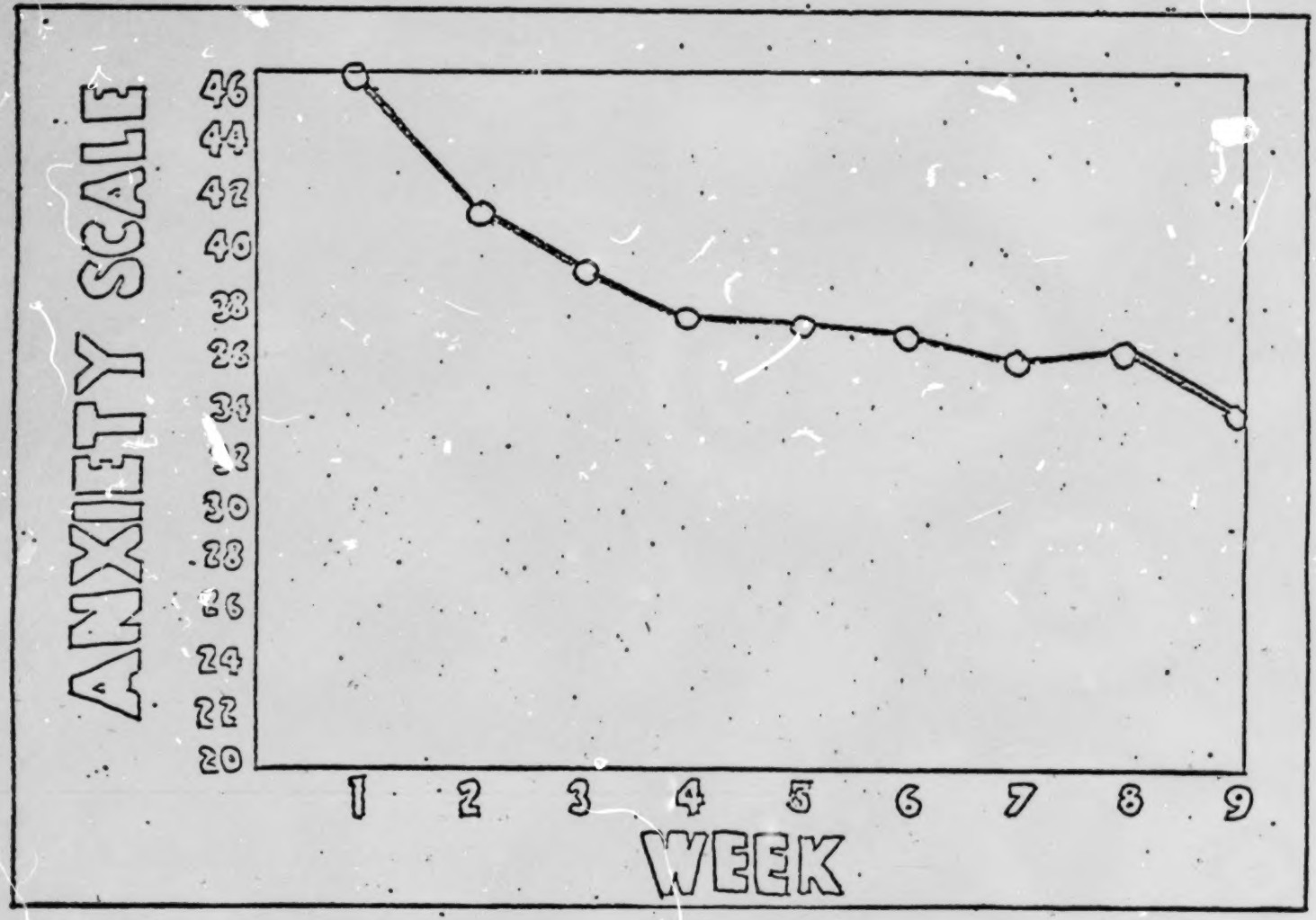
ANXIETY SCALE
46
44
42
40
38
36
34
32
30
28
26
24
22
20
1
2
3
4
5
6
7
8
9
WEEK

Figure 4

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